A STUDY OF THE STOCK INDEX FUTURES MARKET

IN HONG KONG

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ABSTRACT

The Hang Seng Index Futures, the first stock index futures in Hong Kong, started trading in May, 1986. The market is administered by the Hong Kong Futures Exchange Ltd. Clearing and guaranteeing services are provided by the International Commodities Clearing House (HK) Ltd. and the Hong Kong Commodities Guarantee Corporation Ltd.

During the past ten months, the market has experienced a rapid growth. Average daily trade volume increased from 1,635 contracts (May, 1986) to 14,554 contracts (March, 1987). While statistics suggest that speculation dominated the market during the first few months, hedging, arbitrage, spread trading, etc. have also increased recently.

Regarding market participants, two broad types, namely hedgers and speculators have been identified. Hedgers seek price protection while speculators are profit-oriented. Participants in the market are subject to the regulations of the Exchange. These regulatons, together with the existence of the Clearing House, the Guarantee Corporation, the Compensation

Fund, and specific membership and contract requirements offer sufficient protection to the common investors.

Due to the nature of the market, specifically the transaction costs and execution problems involved, trying to manipulate the market is extremely difficult. The market is, however, still relatively immature as seen from the high volatility of the price of the futures. Due to the frequent large price fluctuations, the price of the stock index futures cannot be used as a good aid for predicting future spot prices.

Not much impact is expected from the Singapore and the coming Japanese stock index futures markets. This is because their underlying instrument is the market index of the stock market in Japan. The three markets hence can serve different functions for different investors.

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CHAPTER I

INTRODUCTION

General Background

Hong Kong has long aimed at becoming the major financial centre of the Asian Pacific region. During the past two decades, along with the development of the socio-economic infrastructure and the formulation of new governmental regulations, many new financial instruments have been introduced into the economy. One of the most recent is financial futures.

Financial futures is a particular category of futures and shares many basic similarities with commodities futures. Examples of financial futures include interest rate futures, currency futures and stock index futures. In general, the trading of such futures serve very different functions to different market participants. However, basically two broad types of participants can be identified.

One type is the speculator. Speculators make use of the market in pursuit of profit opportunities

through assuming price risk. The other type is the hedger. Hedgers are those who use the market as a means of getting insurance against violent or abrupt price fluctuations.

In Hong Kong, futures contracts are traded at the Hong Kong Futures Exchange Ltd. Clearing and guaranteeing services are provided by the International Commodities Clearing House (Hong Kong) Ltd. and the Hong Kong Commodities Guarantee Corporation Ltd.

The Hong Kong Futures Exchange Ltd. was originally called the Hong Kong Commodity Exchange Ltd. and was incorporated on December 17, 1976. It changed to its present name in May 1985. At present, there are three commodities being traded. They are gold, sugar and soybeans. The only financial futures is the Hang Seng Index Futures.

The Hang Seng Index is the most popular stock index of the local stock market. Its value is mainly determined by the daily price fluctuation of 33 constituent stocks. The Hang Seng Index Futures first started trading on May 6, 1986. In terms of average daily trade volume, there is an increase from 1,635 contracts for May 1986 to 14,554 for March 1987. On April 9, 1987, the trade volume reached a historical height of 30,390 contracts. This relects the great popularity of the instrument.

Objectives of This Study

This study is exploratory, descriptive and analytical in nature. There are two main objectives.

First, since the stock index futures market is still relatively new in Hong Kong, this report aims to provide a general overview of the concept, the functions, the structure, the operations, and the development of the market for the investors. Moreover, because there is little published literature focusing on the local environment, this report will hopefully help to fill the gap.

Second, the study will seek to analyze certain particular characteristic developmental features of the Hong Kong market. Appropriate suggestions will be made to the Hong Kong Futures Exchange Ltd. in the hope of improving the prospects of the market.

CHAPTER II

SCOPE AND METHODOLOGY

Scope of Study

This study will concentrate on the Hang Seng Index Futures in Hong Kong. Commodities futures and other financial futures in the proposal stage are beyond the scope of our study.

Methodology

This study is exploratory in nature, emphasizing on fact finding and qualitative analysis. Information is mainly obtained through a literature review and several personal interviews. Simple quantitative analysis has also been used to supplement the qualitative analysis.

Our main sources of secondary information are university and public libraries, government departments, the Hong Kong Futures Exchange Ltd. and private institutions such as brokerage houses. Materials from these sources include books, journals,

newspapers, pamphlets, annual reports, operation manuals, government regulations, and trade records.

As for primary information, eight formal interviews and three informal interviews have been conducted. The interviewees include brokers, dealers, common investors, managers of brokerage houses, and senior staff of the Hong Kong Futures Exchange Ltd. In addition, a visit to the trading floor of Hang Seng Index Futures has been arranged.

Limitations

Besides the inevitable constraints of time and human resources, there are two major limitations.

First, since the concept of stock index futures is so new in Hong Kong, there are relatively few publications related to this topic. Moreover, most of the available information is only short or medium length articles in newspapers or periodicals. Though there are slightly more US publications on this field, many are not quite applicable to (and some are not obtainable in) Hong Kong. In fact, even for the United States, the first stock index futures did not appear till 1982 and relevant references are still far from abundant.

Second, some of the interviewees were unwilling or unable to disclose certain information which they

considered confidential or controversial. Though disappointing, this is certainly understandable. In general, the response was satisfactory and the researchers would like once again to thank them for their kind and sincere assistance.

Framework of the Report

The report consists of several parts. First, there are introductory chapters covering the general background, objectives, scopes, and methodology of the research.

Second, subsequent chapters will examine the concept of stock index futures, the administrative structure and trading mechanics of the market. This will be followed by an examination of the functions of the market, and various trading strategies different participants used.

Finally, certain characteristic features, controversial issues, past performance and future prospects of the Hong Kong Futures Exchange will be highlighted and discussed. The report ends with a conclusion chapter.

CHAPTER III

STOCK INDEX FUTURES IN HONG KONG

The General Concept of Futures

A futures contract can be defined as a purchase and sale agreement which carries the following specifications concerning the item being traded:

(1) the quantity to be delivered;
(2) the quality with reference to standardized measures;
(3) the places and procedures of delivery;
(4) the time interval within which delivery is to be made.

While it is true that certain similarities exist between a futures contract and a forward contract, the two differ in several major respects. A forward contract is an agreement between two specific parties in which the parties incur an obligation to each other in making or taking delivery of a particular commodity at a certain future date for a certain predetermined price. It is typically a nonstandardized agreement, the terms of which is subject to the different specific

requirements of different parties. Prices are clearly specified for individual contracts. On the other hand, a futures contract is a standardized forward contract with respect to quantity, quality and details of delivery. No price is specified in futures because this is to be determined by the market. In other words, a forward contract has a lower transferability, and consequently, a lower liquidity. The cancellation of a forward contract usually requires the consent of the other party and often incurs a penalty. Moreover, while futures trading is monitored by the regulations of the Futures Exchange and the government regulations, a forward contract is less subject to such external control.

Types of Futures

Broadly speaking, two categories of futures can be identified: commodities futures and financial futures.

Commodities futures have a much longer history. The earliest futures market probably arose from dealing in agricultural products. It was known that early in the 19th century, producers, manufacturers, and consumers had already started making agreements on future deliveries. Those agreements were made with the intention of making or taking physical delivery in order to eliminate the price risk. Most of the commodities futures today, however, will not involve

actual physical delivery and will be settled by offsetting transactions. At present, the US is the centre of futures trading. The major trading centres include Chicago, New York, and Kansas City. As for Hong Kong, commodities futures trading started in 1977. Currently, there are three commodities futures being traded in the Hong Kong Futures Exchange Ltd., namely gold, sugar, and soybeans.

Financial futures is a relatively new concept despite its many basic similarities with commodities futures. A financial futures contract promises the delivery of a specific amount of a particular financial instrument at some future time. Examples include interest rate futures, currency futures, and stock index futures.

The General Concept of the Stock Market Index

A stock market index is basically a market indicator indicating the aggregate movements and general price levels of common stocks in a stock market.

Different market indicator series have different methods of construction, depending on factors like sampling (eg. size, breadth, source), weighting (eg. price-weighed, value-weighed, unweighed), and computational procedures (eg. arithmetic average,

geometric average, or index).

Such market indicator series can be used for several functions. First, they provide convenient reference points for evaluation of individual portfolio performance. Second, by analyzing the relationship between a series with other economic variables, how different factors may affect the aggregate stock price movements can be examined. Third, technical analysts can make use of the past records of changes in the series to predict future index movements. Fourth, recent portfolio theory suggests that a particular stock is subject to both systematic (overall market) risk and unsystematic (stock-specific) risk. A market indicator series can be used for analyzing the systematic risk component of a particular stock.

Stock Index Futures

Stock index futures is a particular type of financial futures. Its exact origin is difficult to trace. It is known however that in 1973 to 1975, the Forward Contract Exchange Company in Amsterdam had already allowed the trading of forward contracts based on the Dow Jones Industrial Averages, the Financial Times Index of Ordinary Shares, and the Tokyo Dow Jones Index. As for the US, the Kansas City Board of Trade introduced the first stock index futures on the Value Line Composite Average (VLA) in February 1982. This

was later followed by the introduction of S&P 500 Index Futures, the New York Stock Exchange Composite Index Futures, the OTC Index Futures, etc.

What distinguishes the stock index futures from other futures is that the instrument underlying the index futures contract is not an asset, such as a commodity or a bond that is traded in the spot market, but a stock market index.

Such a contract can be seen as a transferable agreement between an anonymous buyer and seller to make a cash settlement upon the expiration or offset of the contract based upon the futures price at that time. In other words, there is only a cash settlement, but no physical delivery for the stock index futures contract. Instead of buying or selling a commodity, an index futures trader is actually only taking a position in a contract trading transaction at a fixed price. The trader is simply fixing his entry point and subsequently gains or loses as the index varies.

Hang Seng Index

There are two kinds of stock market index in Hong Kong - the Hang Seng Index and the Hongkong Index. The Hang Seng Index (HSI) is the most popular index of the local stock market. It is a weighted aggregate index and is calculated by the Weighted Market Capitalization

Method.

Basically, the index is determined by the prices of 33 constituent stocks (see Appendix). July 31, 1964 was set as the base date and the index of that day is assigned a value of 100.

For any particular day, the index can be calculated by the formula:

$$\text{HSI} = \frac{\text{Total Market Value at Current Market Prices}}{\text{Total Market Value at Base Market Prices}} \times 100$$

The market value of each stock is simply the product of the market price of that stock times the number of shares issued. The total market value is the sum of the market values of all the 33 stocks.

The Index's daily fluctuation reflects the capital changes in the constituent stocks. The adjustment between successive days can be calculated by :

$$\text{Today's Closing Index} = \frac{\text{Today's Closing AMV}}{\text{Previous Day's RAMV}} \times \text{Previous Day's Closing Index}$$

where AMV = aggregate market value

RAMV = revised aggregate market value

Hang Seng Index Futures

The only index futures in Hong Kong is the Hang Seng Index Futures. The specifications of the contract are as follows:

Trading Units	HSI x HK$50
Price Quotation	Hong Kong Currency
Trading Method	Open outcry
Trading Months	Spot month, the following month, the second subsequent following month
Minimum Price Fluctuation	One index point ($50)
Daily Fluctuation Limit	100 index points above or below the previous day's settlement price
Trading Hours	10:00 - 12:30 and 14:30 - 15:30
Termination of Trading	Last trading day of the delivery month
Settlement Day	First business day following the last trading day
Settlement Terms	Cash settlement through the Clearing House at the index value for settlement as calculated by the Hang Seng Bank
Original Margin	HK$12,000

Hang Seng Index Futures began in Hong Kong less than one year ago and it has experienced significant growth. The causes of such growth, the functions of such index futures, and the mechanics and operation of futures trading will be discussed in greater detail in later chapters.

Stock and Stock Index Futures

To better understand the concept of stock index futures, it will be useful to compare it with stock trading.[1]

First, both stock and stock index futures trading allow substantial liquidity, for both take place at a highly organized exchange. The basic mechanics of buying and selling are also quite similar in both instances. A buyer or seller gives an order to the broker, who then sends it to the floor of the exchange where a member of the exchange executes the order accordingly. Moreover, for both areas of investments, the fundamentalists and the technical analysts can apply their respective methods of analysis to aid their decisions.

However, trading stock and trading stock index futures also have many differences. Stock trading is

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[1] For general discussion, read Frank K. Reilly. Investment. Japan: The Dryden Press, 1986, pp.512-516.

essentially a transfer of an asset, involving the consequent transfer of stock ownership. Stock index futures trading is only a transfer of price risk through an agreement between a buyer and seller. The index is not "owned" by anyone. A stock buyer can hold the stocks for as long as he likes. Yet, a futures buyer is subject to a nominal limit of holding time span.

In terms of capital requirements, much greater leverage is possible in futures trading because only a margin deposit is required to participate in trade. Moreover, it should be noted that in Hong Kong, it is not possible to sell "short" stocks but it is possible to sell short futures. This implies a greater flexibility of trading strategies for a futures trader.

Another difference is that in the stock market, there is a specific selling side and buying side for each transaction. In futures trading, however, the Clearing House acts as the seller to the buyer and the buyer to the seller for every transaction. Those who actually buy and those who actually sell futures contracts in a trade have little direct contact with each other.

Finally, one more difference between stock trading and stock index futures trading is that a stock trader needs to analyze both the firm-specific factors and the

general market factors. In contrast, a futures trader, provided that he is not involved in stocks trading, only needs to pay particular attention to factors affecting the overall market.

CHAPTER IV

THE ADMINISTRATION AND CLEARING OF THE STOCK INDEX FUTURES TRADING IN HONG KONG

Administration

The chief administrative body of the stock index futures market in Hong Kong is the Hong Kong Futures Exchange Ltd.

Hong Kong Futures Exchange Limited

Hong Kong Futures Exchange Ltd. was originally called The Hong Kong Commodity Exchange Ltd., which was established on December 17, 1976.

Contracts currently traded at the Exchange include sugar futures, soybeans futures, gold futures and Hang Seng Index Futures. The first futures contract traded was cotton which commenced trading in May, 1977 (but the trading was suspended in the early 80's). This was followed by sugar futures in November, 1977, soybean futures in November, 1979, gold futures in August, 1980 and Hang Seng Index futures, the first financial

futures contract in Hong Kong, in May, 1986.

Generally speaking, the major components of the administration of the Exchange are the Board of Directors, the General Manager, the Market Division Committees and the staff departments.

1. Board of Directors

The Chairman of the Board, for the time being, is Dr. Kim Cham Yau-sum, JP. There are 12 members on the Board. The Chairman and the three Vice Chairmen, in addition to their Board members' duties, have excutive functions. They have the power to handle emergencies in the market and they are authorized with other specific powers. The Board as a whole is responsible for formulating the rules and regulations as well as policy making of the Exchange. Also, it can appoint members to different committees of the Exchange and exercise disciplinary power over its members.

2. General Manager

The General Manager deals with the daily administration and supervision of the Exchange under directions from the Board of Directors.

3. Market Division Committees

The Exchange has four Market Divisions: Agricultural Products, Metals, Indices, and Currency and Interest Rates. Each of these has its own characteristics and practices. Also, a committee is

set up for each division to advise the Board on matters concerning the particular division. The members of the committees are themselves experts in that particular field.

4. Staff departments

There are four staff departments to support the Exchange. They are the Audit and Surveillance Unit, the Training Unit, the Market Section, and the Membership Section. The Audit and Surveillance Unit is responsible for the supervision of members' financial position in order to protect the financial integrity of the market. The Training Unit runs training programmes for members and the general public through seminars and courses. The Market Section is responsible for the orderly conduct of the market. Finally, the Membership Section is responsible for the registration and administration of the membership.

Membership

There are three kinds of members of the Exchange: Full Member, Market Member and Trade Affiliated Member.

1. Full members

They must be individuals ordinarily resident in Hong Kong or companies limited by shares and incorporated in Hong Kong and should hold at least one Ordinary Share of the Exchange. They have floor

trading rights in all Market Divisions upon application. They have to contribute to the Compensation Fund.

2. Market Members

They must be individuals ordinarily resident in Hong Kong or companies limited by shares and incorporated in Hong Kong and should hold at least one Standard Share of the Exchange. They have the floor trading right in one Market Division but may be granted floor trading rights in other Market Divisions with special approval from the Board.

3. Trade Affiliated Members

They are overseas companies which are not qualified to hold shares of the Exchange. They do not have floor trading rights and have to put all trading orders through a Full Member or a Market Member. Although they cannot vote, they also do not need to contribute to the Compensation Fund. They also trade at a lower commission rate.

The Market

All trading at the Exchange is centralised in a marketplace where various facilities such as booths, trading rings, price quotations boards, audio and visual devices, etc., are installed.

Futures contracts are traded under different-

systems. For instance, the soybeans contracts are traded under the One Price Group Trading System, the gold contracts are traded under the Open Outcry System, the sugar contracts are traded under both systems, and the Hang Seng Index contracts are traded under the Open Outcry System. Under the Open Outcry System, a floor broker who represents his brokerage house speaks out the price they would offer at the trading ring. At any time, there are more than one floor broker shouting in the ring. A trade is made if another floor broker accepts the price. At the peak trading hours, there may be several dozens of floor representatives shouting out loudly within the trading ring. Therefore, the markerplace is very noisy indeed.

Market information is published through daily and weekly Market Reports by the Exchange and the information is also disseminated to the public through Reuters, UPI, and other media channels. In addition, a Newsletter is published every month giving a monthly review, statistics and graphs of the trading facts in the market.

Financial Integrity

The financial integrity of the futures market is doubly protected by the Guarantee system and the Compensation Fund.

1. The Guarantee System

In Hong Kong, International Commodities Clearing House (Hong Kong) Ltd. handles the registration and clearing of futures contracts. It acts as the manager of the Hong Kong Commodities Guarantee Corporation Ltd., which is owned by a consortium of banks, and guarantees to clearing members the due fulfilment of contracts. As soon as members have agreed and registered a trade with the Clearing House, the Guarantee Corporation takes the responsibility of ensuring fulfilment of the futures contract. This enables the futures markets to operate with sufficient financial strength and integrity.

2. The Compensation Fund

Private investors are protected by the Fund if they suffer from losses due to the misconduct of an Exchange member. The Compensation Fund is administered by the Government. Every member has to make an initial contribution of HK$50,000 to the Fund. A further contribution of not more than HK$50,000 may also be required upon the request of the Commodities Trading Commission. In addition, a flat levy is collected from members for each contract traded in the Exchange. In case of receiving any complaint from an investor against a member, the Exchange or the Commission will investigate whether compensation is justified or not.

Clearing and Guaranteeing

Whenever a trade is made between two floor brokers within the trading ring, a slip specifying the details of the trade such as the names of the seller and buyer (the brokerage house's name), the price made, the time and date, the number of lots traded (number of contracts traded), etc. is submitted to the ICCH counter. Profits or losses are calculated and settled directly to members' accounts. This process is known as clearing.

International Commodities Clearing House Limited (ICCH)

ICCH was founded in London in 1888 as the London Produce Clearing House providing futures markets with clearing and guaranteeing services. Its name was changed to International Commodities Clearing House Ltd. in 1973 due to the increasing internationalized nature. Since 1982, the following six largest British banks have been the shareholders of ICCH:

Barclays Bank plc	20%
Lloyds Bank plc	20%
Midland Bank plc	20%
National Westminster Bank plc	20%
Standard Chartered Bank plc	10%
Williams & Glyn's Bank plc	10%

The issued capital currently stands at 15,000,000 Pound Sterling plus reserves.

Since the establishment of the Hong Kong Commodity Exchange in 1977, I.C.C.H. (Hong Kong) Ltd. and the Hong Kong Commodities Guarantee Corporation Ltd. have been providing clearing and guaranteeing services for all contracts traded on the Exchange.

The Guarantee Corporation

The existence of the Guarantee Corporation provides confidence to the clearing members, because it guarantees that all contracts will be fulfilled. The Guarantee Corporation currently consists of a partnership of six first class banks and ICCH itself. The total share capital is currently HK$15 Million. The shareholders are:

Barclays Bank plc	80%
The Chase Manhattan Bank NA	
Standard Chartered Bank	
Credit Lyonnais Hong Kong	
The Hong Kong & Shanghai Banking Corporation	
The Wing On Bank Limited	
ICCH Limited	20%

The Exchange, ICCH and the Guarantee Corporation have jointly assessed whether the applicants met the required qualifications before granting them membership. Therefore, in trading, once a contract is registered and deposits and margins liabilities are covered, the member does not have to concern himself.

about the credit-worthiness of the counterparty to the trade. The Guarantee Corporation actually stands between the buyer and the seller and protects each of them against the possibility of the other side going into liquidation and defaulting on his contracts.

Order Processing and Clearing Procedure

The normal order processing procedure will be described here. First, a client gives the order to the broker's office. Then the order is sent to the floor of the Exchange. After execution of the order in the market under the market rules, the floor broker will confirm to his back office that the trade has been done and he will report details about price, month of delivery and number of lots made. The broker's back office will then contact the client to confirm that his instructions have been carried out. This will be followed by a formal contract which the client has to sign and return to confirm the acceptance of the deal.

As regards the clearing procedure, immediately after a trade has been done, a clearing slip (see Appendix) will be made and initialled by both the buying and selling floor representatives as evidence. The slip will then be delivered to ICCH which will input the details into their computer system for processing. At the close of each working day, ICCH will print a Daily Trading Statement (DTS) listing all-

deals done on that day to each floor member. The DTS must be checked by each member immediately and all listed deals must be confirmed. Afterwards, the DTS are returned signed so that overnight processing may start.

Equity Margining System

Every day, the ICCH calculates the equity of each member and compares it with the deposit liability of that member so as to determine whether a margin call/refund is due from/to the clearing member.

The calculation is basically to compare the original contract price held on the member's file at ICCH with the current market price on each day's closing session. The difference will be added to / subtracted from the member's cash balance to give the equity of that day. The equity will then be compared with the cash liability of that member and any deficit / excess will be paid by / paid to the member.

Payment of Margin Money

All payments of clearing member's liabilities are made through the Direct Margin Debiting System. The system operates once a day in the morning. Some major banks provide this service at select branches. The member can select one of such banks which will process

the transfers internally. The bank will debit the member's account and, if payment cannot be made, inform ICCH by 9:30 a.m. The Guarantee Corporation's account will be credited afterwards.

Cash Settlement at Maturity

The Hang Seng Index Futures contracts will be settled in cash upon maturity. Any members who are still holding the spot month contracts that remain open after the close of the last trading day have to settle the contracts at 9:30 a.m. on the following business day. Any profit / loss will be credited / debited to the member's account with the Guarantee Corporation. If the account is insufficient to cover the liability, a call is made through the Direct Margin Debiting System. If an excess occurs, a payment will be made upon request.

Membership Categories

Under the clearing system, there are three categories of clearing members:

1. General Clearing Member (GCM)

He can trade and clear contracts for his own account (with formal agreement) and other Clearing Members' accounts (via the system).

2. Individual Clearing Member (ICM)

He can trade and clear contracts for his own account, client's account and other Clearing Members' accounts (via the system) but cannot trade for Non-Clearing Members.

3. Non-Clearing Members (NCM)

He cannot clear contracts but can trade for his own account, client's account and other Clearing Members' accounts (via the system). He has to make a formal agreement with only one GCM so as to clear his contracts.

CHAPTER V

THE TRADING MECHANICS

The basic trading mechanics are very simple. An investor first needs to open an account with a brokerage house. Depending on the number of contracts he wants to trade, he makes the appropriate amount of margin deposits. As regards actual trading, he will give his orders to the broker through predetermined communication methods. A floor broker will eventually execute the orders for him in the market. For each completed transaction, appropriate records will be made and a commission will be charged. The gain or loss of the investor will be mark-to-market daily.

Buying on Margin

Buying or selling of a contract is done on a margin basis which is HK$12,000 per contract. The margin acts as a deposit or down payment to ensure performance of the contract commitment. If the market index works against an investor's forecast and the contract value's margin falls 30% below the initial

level, an infusion of funds will be required from him to raise the margin back to its initial level. Conversely, the investor can draw the excess from his account or leave the excess in the account for the trading of more contracts because of the larger margin he then has.

Commission Charges

Generally, the amount of commission charges depends on the Hang Seng Index level. Typical charges are HK$121 for day trade (the transaction closes on the same day) and HK$201 for overnight trade. These charges are normally determined by the Futures Exchange. For day trade, the HK$121 is divided into three portions - HK$100 for the brokerage house, HK$20 for the Exchange and HK$1 for the Compensation Fund. For overnight trade, the HK$201 is also segregated into three portions - HK$180 for the brokerage house, HK$20 for the Exchange and HK$1 for the Compensation Fund.

Types of Order

A client has to know how to give appropriate orders to the account executive in the brokerage house. Actually, there are many different kinds of orders he can give. Each of them possesses a unique feature, and they will be described one by one.

1. Market order

A market order is an order to buy or sell a futures contract at the current market price obtainable when the order enters the market. Thus the actual price at which the trade is made is not predetermined by the client.

2. Limit order

A limit order is an order to buy a futures contract at no more than a specified price or sell at no less than that price. If this criteria is not met, the client does not trade.

3. Day order

A day order can be any type of order, which will be cancelled automatically if it is not executed on the day specified.

4. Good till cancelled order (GTC)

A GTC can be any type of order placed at the broker by the client and the order remains valid all the time until it is cancelled.

5. Market if touched order (MIT)

A MIT is an order which becomes a market order when a specific price is reached.

6. Fill or kill order

A fill or kill order is an order which once enters the market has to be executed immediately. Otherwise it

will be cancelled.

7. Discretionary order

A discretionary order is an order in which the client has given the broker the full power to trade at the broker's discretion.

8. Basis order

A basis order specifies market entry whenever a price difference between two futures contract series is observed and is used for executing a spread over at a given basis.

9. Stop limit order

A stop limit order is an order which is triggered when the market price reaches the stop price. Nevertheless, the floor broker has a price limit at which he can fill the order.

10. Stop loss order

A stop loss order is an order which is triggered when the market price reaches the stop price specified. The contract is then traded as fast as possible.

With the best use of the above orders, a client can make profits in a less risky way and will only suffer a predetermined maximum loss.

CHAPTER VI

MARKET PARTICIPANTS AND TRADING STRATEGIES

Market Participants

Before going into a detailed discussion of trading strategies, it will be useful to have a brief idea of the various types of market participants.

As suggested earlier, the most convenient classification is dividing participants into hedgers and speculators. The hedgers assume a position in the futures market equal and opposite to a current spot position hoping to protect themselves against any violent price movements in the cash market. They are risk-adverse in nature. The speculators are, however, profit oriented. Based on their own judgement, they are willing to take various degrees of risk through buying or selling futures in exchange for potential profit.

Such a distinction, however, is mainly based on analyzing the participants' trading objectives. From a more behavioral point of view, the profit-oriented

participants can be further classified into several types.[2]

Arbitrageers - Arbitrageers are engaged in the simultaneous purchase and sale of the stocks/futures in different markets to profit from unequal prices. They seize a profit opportunity whenever the price difference between spot and futures exceeds a certain pre-determined limit.

Scalpers - Scalpers trade in and out of the market on very small price fluctuations, but in very large volume. Their existence helps to maintain the liquidity of the market.

Day Traders - Day Traders trade like scalpers, but they usually deal with larger price changes and enter-or-exit the market less frequently during the day. Unlike the position traders, who may hold their position for a long period of time, day traders will not carry their positions overnight.

Spreaders - Spreaders expect to see changes in the price relationship between contracts of different delivery months. They engage in purchasing one contract and selling another contract, hoping to make a profit out of the differential.

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[2] See Frank J. Jones & Terrence F. Martell. "Participants in the Futures Market." collected in Fabozzi & Zarb (ed.). Handbook of Financial Markets. USA: Dow Jones, 1981, pp. 690-691.

Floor Traders - In the US, there are some people called floor traders who trade for the public and for their own accounts (when they trade for their own accounts, they are known as locals). Their role is quite similar to that of a specialist in the stock market. Their existence enhances the liquidity of the market. In Hong Kong, however, no such floor trader exists and there is still much controversy over whether or not allowing their participation will be beneficial to a market.

Uses of Hang Seng Index Futures

Hang Seng Index Futures can be used as :

- a substitute for a stock portfolio consisting of the 33 constituent stocks of Hang Seng Index;
- an instrument for hedging;
- an instrument for speculation;
- an instrument for arbitrage;
- an instrument for spread trading;
- an investment vehicle which may bring tax advantage to the investor;
- an aid for prediction of the future movement of the spot price.

Since different participants have different objectives, their trading strategies also vary. However, one thing in common is that all investors have to determine what is a reasonable price and what price-

will bring potential profit. Basically, they have to consider the price of spot, the cost of carrying, and the expected future spot price.

For index futures trading, the cost of carrying is mainly the interest. Mathematically, the relationship:

$$P_f = P_{cash} + \text{interest} + \text{transaction cost}$$

where P_f : Price of futures

P_{cash} : Price of cash

describes the equilibrium state.

Futures as a Substitute for a Portfolio

Theoretically, a portifolio can be constructed using the same 33 constituent stocks of Hang Seng Index with the proportion of each in exact correspondence with its weighing in Hang Seng Index. The change in value of such a portfolio can be determined by observing the fluctuation of Hang Seng Index. Since the value of a Hang Seng Index Futures contract also exactly corresponds to the fluctuation of the Hang Seng Index, HSI Futures contracts can be used as a substitute for the above mentioned portfolio.

Systematic and Unsystematic Risk

According to the Capital Asset Pricing Model (CAPM), a stock's position is subject to two types of risk: systematic and unsystematic risk. Unsystematic risk is stock-specific, related to factors like the strength of the particular company, its business prospect, etc. Systematic risk is aggregate in nature, related to factors that affect the market as a whole, eg. political climate, governmental monetary policies, etc.

Unsystematic risk can be eliminated by diversification such as through portfolio investment, because different stocks' price fluctuations tend to offset one another. As for systematic risk, this can only be reduced by using the Hang Seng Index Futures.

If, for example, an investor has strong reasons to believe that the overall market trend will be favourable in the near future and yet he has no particular understanding of any stock, he may want to invest in a portfolio the value of which exactly corresponds to the overall market movement. However, he may be unable or financially incapable of acquiring such a portfolio. Through investing in Hang Seng Index Futures, he will be able to avoid the factor of unsystematic risk and profit from the expected bull market.

Hedging

Hedging can be defined as the use of a futures position as a temporary substitute for the purchase or sale of the spot index. A complete hedge involves establishing a position in a futures contract approximately equal, but opposite to, an already existing or anticipated net cash position so as to protect profit margins against an adverse change in price.

A decision which a portfolio manager has to make is: how many contracts will be needed for an effective hedging of the portfolio he holds. The answer varies, depending on the composition of the individual portfolio. The fact is each portfolio manager must determine the degree of relative price movement of his portfolio with respect to the market movement. One common method is to make use of the Beta coefficient.

The Beta Coefficient

Beta is a sensitivity measure of the price of a stock in relation to the overall market movement. It can be calculated from a regression analysis between the price changes of a particular stock and the changes of the Hang Seng Index. A certain stock with a beta of 1.5, for example, means that when there is a 1% rise in the market, there is a 1.5% rise for that stock.

For a whole portfolio, the beta is obtained from the proportional average of the betas of the stocks comprising the portfolio. The following is a simplified illustration.

Example of calculating a portfolio beta:

Stock	Holding		Price		Market Value
A	1000	x	$5	=	$5,000
B	500	x	$10	=	$5,000
C	500	x	$20	=	$10,000
			Total	=	$20,000

Stock	Beta		Market Value		Weighed Market Value
A	1.2	x	$5,000	=	$6,000
B	1.5	x	$5,000	=	$7,500
C	2	x	$10,000	=	$20,000
			Total	=	$33,500

$$\text{Beta of the portfolio ABC} = \frac{\text{Weighed Market Value}}{\text{Market Value}}$$

$$= \frac{\$33,500}{\$20,000}$$

$$= 1.675$$

A stock index futures contract has a beta of one, for its change in price value is in direct one to one proportion of the market movement. In other words, if the market is originally at 2,000 points and it moves by 1% (20 points), then the value of the futures contract will also have moved by 1% (20 x $50). Under the same situation, a portfolio with, say, a beta of 3 will have moved by 3%. If the manager of this

portfolio wants to hedge the portfolio he holds with Hang Seng Index Futures, he has to buy/sell futures of three times the price value of the portfolio. Such a value is called the beta adjusted value of coverage.

Theoretically, a complete hedge will temporarily reduce the beta of the portfolio to zero. Yet, this will also simultaneously deprive the investor the opportunities of both losing and gaining. Hence, in reality, a portfolio manager will usually hedge only a portion of his portfolio, exposing the rest to gains or loss.

Perfection of a Hedge

There are several factors affecting the perfection of a hedge.[3]

First, the portfolio to be hedged may not contain all the component stocks of Hang Seng Index or they may not be in proportional weighting.

Second, the beta calculated is based on historical statistics. This beta value may have already changed by the time of hedging. If so, then the amount of futures contracts bought or sold may not be able to satisfactorily hedge for the desired proportion of the portfolio.

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[3] "Financial Futures: a New Market for London." Midland Bank Review Autumn/Winter 1982, p.24.

Third, there is the basis risk. Basis is the difference between the price of the futures contract and the spot price. Since price is influenced by market expectation, it is unlikely to have constant corresponding movement for the futures and spot prices, for the expectation for different time may be different. If a hedger initiates a hedge and the basis remains constant, then the hedge is relatively successful. If the basis changes and the hedge has not adjusted for the change by buying or selling contracts, the original hedge objective cannot be satisfactorily achieved. Due to this characteristic, hedging can be seen as only substituting price level risk (adverse movement of price) with basis risk (changes in relative spot/futures price).

Fourth, the cost of hedging must also be considered. This includes the commission cost, the opportunity cost of interest foregone for capital locked, the cost of capital, and the execution cost, such as the spread between the bid and offer price. The hedger must also prepare for the variation margin requirement because futures are mark-to-market daily.

Short Hedge

There are two basic types of hedge transactions, the short (selling) hedge and the long (buying) hedge.

A short hedge involves the purchase of spot index (stocks) and subsequent or simultaneous sale of a predetermined quantity of futures. The main objective is to protect the value of an existing or prospective inventory against a decline in price.

In general, the situation is that the investor expects a coming general decline in the stock market. He, however, is unwilling to liquidate the securities he is holding. Instead, he sells stock index futures of a predetermined value to compensate for the expected loss of his portfolio. If his prediction is correct, ie. the market does decline, his loss will be greatly reduced.

Long Hedge

A long (buying) hedge involves the purchase of futures to protect against a possible price increase of stocks prior to/in substitue of its actual physical purchase.

Consider the case of a fund manager who has strong reasons to believe the market will go up soon. He would like to buy stocks immediately but funds are not immediately available. He can instead buy (long) index futures (because only a margin deposit, ie. less capital is required) and later liquidate them when funds become available. The gains from futures will

partly offset the higher price he has to pay for buying stocks.

Other possible situations where the long hedge can be applied include:

1. A fund manager expects the market will decline in the short run but will be bullish in the longer run. To compensate for the short run loss, but unwilling to/or unable to buy more stocks and hold them to wait for the later return, he can instead buy futures.
2. The fund manager expects the market will go up soon but has not yet formulated his portfolio composition or investment strategy. He can first buy futures so as not to miss the opportunity of making a profit.
3. A fund manager worries that a large purchase of stocks he is going to make will drive up the prices. He can first buy some futures contract to offset the later higher price he needs to pay.

Speculation

Speculators in a futures market are those who buy or sell contracts based on their anticipation of market movement. With an aim of maximization of profit, they have to assume the risk of making wrong forecasts.

Strategy and Risk

The basic strategy of speculators is not very complicated. They will buy (long) futures when they expect the market to rise (bullish). If the market does rise later, they can re-sell the contracts then and gain profit. They will sell (short) futures when they expect the market to decline (bearish). If their judgement turns out to be correct, they can then re-buy the contracts and gain profit.

Hence, what determines a speculator's success is the accuracy of his market forecast. Besides such a risk of poor judgement, there are other risks involved in speculation. For example, the expected trend may not be realized in time, ie. the contracts could have expired before the expected market movement takes place. Another possible trouble is that there may be frequent variation calls due to intermediate technical corrections - the speculator's capital base may be exhausted.

Functions

Speculators serve several important functions in the futures market.[4]

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[4] Interesting discussion can be found in Handbook of Financial Markets. pp.685-689. Also read J. Duncan La Plante. "Growth & Organisation of Commodity Markets." in Perry J. Kaufman (ed.). Handbook of Futures Markets. USA: Wiley, 1984, pp.I.20-21.

First, without speculators, it is not possible to have a reallocation of price risk from those less willing to bear it (hedgers) to those more willing to take it (speculators). Moreover, hedgers will otherwise not be able to concentrate their efforts on efficient production/trading on the cash market.

Second, the existence of speculators greatly increases the market's liquidity. Since there is a great number of such participants and they are willing to accept/offer different prices, their existence increases the efficiency/probability of accomplishing a transaction.

Third, in a liquid market, profit-seeking speculators respond to news quickly and are competing with each other. The consequence is to cause the price to have better and faster adjustment. In other words, their activities help to make the market more efficient.

Fourth, there is the issue of price stabilization. With reference to the futures market, controversy exists. Those who think speculation helps to stabilize prices claim that if speculators are trend followers, then they will sell when the market (price) has the sign of going down and buy when the market (price) has the sign of going up. In other words, the trend or price fluctuation will be accelerated due to

speculators' activities.

Those who hold opposite views, however, believe that the "buy low sell high strategy" of speculators prevents the price from falling too low or climbing too high - ie. they help to smoothen the fluctuation.

As for the effect on the spot market, most will agree that there is a stabilization effect. Just consider the case that there is a general belief (which can be seen in the price structure in the futures market) that price will go up in the future, this piece of information will cause more immediate demand at the spot market and push up the price. When the future date actually comes, the demand (price) will not be as high as it otherwise could have been, for many investors have acquired an inventory earlier. The overall effect is a stabilization of price fluctuation in the spot market.

It can also be noted that one more function of the existence of speculators is that they help to offer information or "free forecast" to other market participants.

Speculation vs Gambling

Some people have negative impression of the term "speculation". Yet the above discussion has suggested that speculation is essential for a market to be liquid

and efficient. In comparison with gambling, the distinction is that gamblers create a game which has risk to satisfy their desire, while speculators are merely assuming risk that is always present in the economic system.

Arbitrage

If an investor buys a product X from market A and sells the same product at market B, he may gain profit provided that the selling price and buying price are different, and that this difference is greater than the transaction cost involved. Such a kind of trading strategy is called arbitrage.

As suggested earlier, a Hang Seng Index Futures contract can be seen as a substitute for a portfolio of the 33 constituent stocks of the Hang Seng Index. Hence, an investor who trades futures at the futures market and stocks at the stock market is essentially trading the same instrument. Theoretically, a trader can employ either short futures - long spot or short spot - long futures strategy, depending on the market situation. However, in Hong Kong, short-selling of stock is not permitted. Hence the only arbitrage strategy is long stock and short futures. This means only when the price quoted on the futures exchange is significantly above the price quoted on the stock exchange (ie. a large "premium" exists) will an

investor see an opportunity to make profit through arbitrage. From statistics, it is discovered that large premiums can often be seen on many trading days (see Appendix). According to some professionals, when the premium is larger than 40 points, active arbitrage activities will be seen on the market. When the prices are at a discount (ie. the price of futures is lower than the price of spot), only those fund managers who have a lot of relevant stocks in hand can make a profit by a strategy of selling stocks-buying futures. Other investors who do not have sufficient stocks in hand cannot seize the opportunity due to the restriction on stock short-selling in Hong Kong.

In the United States, arbitrage is also known as program trading. This is because many investors have made use of computers to develop different trading strategies related to different portfolios under different situations. Since many brokerage firms consider it not sensible to trade a portfolio made up of all the constituent stocks of the index, they tend to select only those more active and influential stocks. This will increase the risk involved but will lower the immediate capital requirement.

Costs and Risk

The cost of an arbitrage may include commission, margin financing (mark-to-market), and net interest

earned or foregone. Theoretically, when the premium is large enough, the cost of carrying will be covered and a profit can be obtained without any risk. To understand why theoretically no risk will be involved, consider the following illustration.

At day X in December, the index on the stock market is 2500, and the futures is at 2590. An investor, seeing the premium, sells 100 futures contracts and buys the constituent of Hang Seng Index stocks equivalent to a value of $50 x 2500 x 100 = $12,500,000. If, 30 days later, the stock market closes with index at 3000, then this investor will lose $50 x (3000 - 2590) x 100 = 2,050,000 in futures, but gain $50 x (3000 - 2500) x 100 = $2,500,000 in stocks. In other words, the overall gain is $2,500,000 - $2,050,000 = $450,000, equivalent to $50 x 90 x 100 (where 90 is the difference between futures and cash index at day X).

If the market goes down to 1900 instead of going up to 3000, still the net gain will be $450,000. This is because in futures, the investor gains $50 x (2590 - 1900) x 100 = $3,450,000 and in stocks he loses (2500 - 1900) x 100 x 50 = $3,000,000. The overall gain is hence still $3,450,000 - $3,000,000 = $450,000, ie. the original premium x $50 x the number of contracts one trades.

Such riskless profit, however, may not be worth taking because the transaction cost, the cost of capital involved, etc. may be too high. The low return may not be attractive enough for many investors. Moreover, it has been said that many program traders are not trading a portfolio exactly corresponding to the HSI constituent stocks. There is also the execution factor to be considered. In the stock market, an arbitrageer may not be able to buy all the stocks he wants. Moreover, since the futures market is so thin in Hong Kong, several simultaneous big orders from different investors may also cause the premium to evaporate quickly. All these are factors that affect the return of an arbitrage. According to some large brokerage houses in Hong Kong, they will not assist their customers to undergo arbitrage trading unless they are prepared to mobilize over a million dollars.

Spreading

A speculator may long one contract and short a price-related contract. Such a strategy is called spreading. A spread is made with the expectation that the price relationship between two contracts will change, so that a subsequent closing transaction will bring a profit. In other words, if X is used to represent the difference between the prices of contract A and contract B, spreader will expect the amount X to

vary as time goes by.

There are different types of spreads.[5] A spread between contracts of different months of the same commodity/financial instrument in the same market is called an interdelivery or intramarket spread. The purchase and sale of the same commodity/financial instrument in two different markets is called an intermarket spread. As for the purchase or sale of different but related commodities, in the same or different delivery months and in the same or different markets, it is known as intercommodity spread. In the following section, only the interdelivery spread of Hang Seng Index Futures will be discussed.

A spreader only cares about the relative changes in prices of the futures contracts, not the absolute values of the contracts. Moreover, because the involved contracts differ only in the expiration date, they tend to change in value in the same direction. For this reason, the risk of spreading is in general less than other transactions.

Bull Spread and Bear Spread

A bull spread is one in which the trader buys (long) the nearby contract and sells (short) the distant contract. The trader's market judgement is

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[5] Handbook of Futures Market. Section 12.3.

that the nearby contracts will be relatively stronger than the distant contracts. In other words, if the absolute price levels are rising, it is expected that the nearby contracts will rise more than the distant ones. If cash price levels are declining, it is expected that the nearby contracts will decline less.

A bear spread is the reverse of the bull spread. The trader will sell (short) the nearby contract and buy (long) the distant contract. He is expecting the distant contracts to be relatively stronger.

Futures as a Prediction Aid

If index futures is a good tool for predicting future spot price, investors can, from the premium of the futures above the spot, calculate the rate of return they may get from investing in a particular portfolio. They can also compare this return with the returns of other investment opportunities.

In theory, whether the prices of index futures can reflect the future spot price depends on the efficiency of the market. In an efficient market, prices adjust rapidly to new information and current prices fully reflect all available information.

In the case of stock index futures, if the market is an efficient market, the price of distant month contracts should not fluctuate greatly from day-to-day.

This is because the price of distant months futures is determined by a particular group of factors which affects the long term price. These factors, however, are unlikely to change abruptly between immediate consecutive days.

As for factors that have short-term impacts on particular days' spot prices, they should have little effect if only the long-run price movement of distant month futures is considered. However, a recent study of the Hong Kong futures market suggested that this is not the case for Hong Kong.[6] The researcher found that the range of fluctuation for the price of distant month contracts is not much smaller than that of the fluctuation of the spot price. Moreover, it was also found that with reference to same set of information, the spot market responds faster than the futures market. This again seems to imply that the Hong Kong futures market is not efficient. However, it may still be too early to conclude whether the Hong Kong market is inefficient for the market is still quite young. More research in this area will be needed.

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[6] Consult S.K. Leung (梁兆基). "Investigating the Forecasting Function of HSIF." Hong Kong Economic Journal Monthly. No.116 (Nov.1986), pp.6-13. The paper is written in Chinese.

CHAPTER VII

CLIENT PROTECTION AND REGULATIONS

Since the futures market is so new in Hong Kong, both the Government and the Exchange would like to ensure a good reputation from the very beginning. Many of the rules and regulations are therefore designed to protect a client's interest against the possibility of suffering from malpractices. Besides the guaranteeing and clearing services discussed earlier, other means of monitoring and supervision include:

- careful assessment of Exchange membership and brokers' licenses;
- specific contractal requirements;
- specific requirements concerning accounting procedures;
- a channel of appeal and the set up of a Compensation Fund.

Supervision and Control

In general, the Government and the Exchange are responsible for supervision and control so as to ensure

that the trading at the Exchange is operating in an orderly manner. All traders must be registered with the Commission before they start their business. The Exchange also sets rules and regulations governing the floor trading and brokerage practices. When the traders apply for Exchange Membership, their qualifications are carefully assessed. Moreover, the Exchange runs an Audit and Surveillance Unit to monitor members' financial positions. It has been mentioned earlier that there is a double protection against the financial integrity for the market - the Guarantee System and the Compensation Fund. The Compensation Fund will be discussed here.

The Compensation Fund

In general, any person in Hong Kong or elsewhere who suffers a loss due to the fault of an Exchange member relating to futures trading can claim compensation. The maximum cover is HK$2 million per shareholder. Claims can be submitted to the Exchange or the Commission within three months after the date of discovering the default.

The Exchange will determine whether it approves, partially approves or disapproves the claim. The Exchange will usually request the claimant to provide evidence. If the claimant fails to provide sufficient evidence within one month, the Exchange may disapprove

the claim.

If the the claimant is not satisfied with the Exchange's decision, he can appeal within one month to the Court or the Disciplinary Committee of the Commodities Trading Commission. If he is still not satisfied, he may make a second appeal to the Court. The decision then is final.

Financial Criteria for Exchange Membership

The financial criteria is different for different types of membership.

1. Full member

A full member's paid-up share capital / capital shall not be less than HK$2 million and its debt to equity ratio shall not be higher than 2:1. Also, its adjusted net admissible assets shall not be less than the higher of 50% of the minimum required capital or 4% of the amounts required to be segregated for clients accounts.

2. Market Member

A market member's paid-up share capital / capital shall not be less than HK$1 million and its debt to equity ratio shall not be higher than 2:1. In addition, its net admissible assets shall not be less than the higher of 50% of the minimum required capital or 4% of the amount required to be segregated for

clients' accounts.

3. Trade affiliated member

A trade affiliated member may be any firm formed or incorporated outside Hong Kong. The Board may set requirements related to financial standing and asset and capital requirements such as paid-up share capital, level of debt to equity ratio and level of adjusted net admissible assets.

Financial Criteria for Clearing Membership

HKFE and ICCH have decided that it is necessary to be an Exchange member if someone wants to be eligible for clearing service. The minimum net worth for ICCH clearing membership is HK$2 million and if a clearing member wants to be a general clearing member, the minimum net worth is HK$5 million.

Client Protection

As a client, he should understand the laws and regulations protecting him. These will be described step by step.

1. Identity of brokerage house and account executive

The first thing is to make sure of the status of both the brokerage house and the particular account executive who handles the client's account. This is because only registered dealers are qualified to trade

as a commission house or brokerage house for index futures. Also, only persons who have registered with the Commissioner for Commodities Trading as dealers or dealer's representatives can serve as account executives of a brokerage house. In addition, only the clients of a shareholder of the Exchange are protected under the Compensation Fund.

Generally, a client can check against the certificate of registration (issued by the Commission) at the main office of the dealer or dealer's representative. Moreover, he can inspect the Members Register kept by the Exchange for the membership status.

2. Client agreement

After opening an account with a brokerage house, a client will sign a contract with the house specifying the rights and obligations of both parties especially concerning the margin calling, the communication method for order placing, the commission rate confirmation and trade authorization, etc. In addition, if the house is an Exchange member, the following must also be specified in the agreement:

- the risk of trading;
- the charge of the Compensation Fund;
- the fact whether the house trades for its own account and if so, whether it can take the opposite position of the clients' orders if the trade is executed.

according to the market rules. The agreement must also clearly state that both parties are subject to the binding of the rules of the Exchange and also that the Chairman of the Exchange can transfer to any other member any open positions held by the member whose trading rights are suspended.

3. Execution of orders and documentation

Every order from the clients must be executed competitively in the market. Therefore, all orders are time-stamped when received and when executed.

Also, the dealer has to make out a contract note not later than the end of the trading day after the day of execution and deliver it to the client within five days.

4. Segregated accounts

The dealer is obliged to keep segregated accounts with a bank, a DTC or an organisation approved by the Commission so as to separate the amounts received from his clients and those from his own deposits.

5. Dispute

If a dispute occurs, a client may complain to the Exchange or the Commission against a dealer who is a member of the Exchange or a registered dealer. The client can make a claim for compensation from the Compensation Fund within three months after the date he finds the default which leads to the dispute.

Cases about Misconduct of Floor Brokers

The Hong Kong Hang Seng Index Futures market started its operation in May 1986. During the initial stage some floor traders were found taking advantage of their clients' accounts to make profits for themselves.[7] The trick goes as follows. Those floor brokers received the clients' orders from the brokerage house. Normally, they should execute the orders as fast as possible and make the trade at the most competitive price for the clients. But some of them made the trade for their own accounts first when they saw the market price was advantageous to them, The clients' orders were executed later at less competitive prices. Clients indirectly lost the chance of making profit because it went to the pocket of floor brokers. This is illegal since the floor brokers should trade on behalf of their house's clients and try to make the best price in the market. Basically this is a breach of contract because as an agent, the broker has not considered the clients' interest as his prime concern.

This phenomenon did exist and could not be avoided. This was because there were too many opportunities to do so. Due to the nature of the stock index futures market, the price moved very fast. Sometimes because of the fast change, it was very

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[7] Read Hong Kong Economic Journal. Jan.6 and Jan.7, 1987.

difficult to make the trade at the best price. Moreover, the prices appearing on the screen of the computer system sometimes had a time lag with the actual performance in the market. So, if a client saw the price shown on the screen and gave an order immediately, he might not get that price when the trade was done. It was difficult to judge whether the broker has done a trick or not.

Usually, this kind of problem arises only with market orders. This is because, with this kind of order, the client does not set his criteria for trading. Relatively, it is more likely for small houses, especially the one man companies, to commit this kind of misconduct. Therefore, small investors are advised to select large and well-established brokerage houses to open accounts. Moreover, when the small house becomes bankrupt, the losses suffered by the clients may not be compensated by the Compensation Fund.

The above mentioned phenomenon occurred mainly during the early stage. The situation has greatly improved now. This is because the regulations have been tightened. There is now constant checking by the Government and the Exchange against the floor brokers. For example, correction of trading slips and close talks between two floor brokers are prohibited. Also, the operations of the marketplace are recorded by

internal videos.

Theoretically, it is all right for floor brokers to trade their own accounts in the market provided that there is no conflict of interest with the clients' accounts and the house account. The US experience suggests that the floor traders' participation will increase the market liquidity, for they are usually able to make faster decisions and response. However, it must also be recognised that the US markets are more mature and they have better infrastructure such as a more sophisticated computer system. The Hong Kong market, at such an early stage, should not approve similar practices so soon.

Restriction on Promotion

The current restriction is that it is not allowed for the houses to advertise to attract clients. This is reasonable because the aim is to protect the public since some potential investors may not know about the market and can easily be misled by advertisements.

Basically, brokerage houses attract new clients through cold calls and personal contacts. There may be some walk-in customers for the well known houses. Many of the new players come from the stock market. It is well agreed by the professionals that participation in the futures market calls for more knowledge and skills

and may not be suitable for amateur individuals unless they receive appropriate professional advice.

CHAPTER VIII

MARKET MANIPULATION

Since the Hang Seng Index futures market in Hong Kong has only a short history, the turnover is not very large when compared with those stock index futures markets in the US. The question of the possibility of manipulation of the market by the large investors hence arises.

A distinction should be first made between "manipulation" and "corner".[8] The term "manipulation" refers to the buying or selling of a security for the purpose of creating false or misleading appearance of active trading or for the purpose of raising or depressing the price to induce purchase or sale by others. The term "corner" means buying of a stock or commodity on a scale large enough to give the buyer, or buying group, control over the price. The person who must buy that stock or commodity, for example, one who is short, is forced to do business at an arbitrarily high price with those who obtained the corner. It is,

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[8] Investment. p.704, p.709.

however, very difficult to corner a market. There is a case in history about the Hunt Brothers, who once tried to corner the silver market in the US. Though they succeeded in pushing up the market price, they could not control the price from eventual collapse.

For a stock index futures market, corner is even more difficult because in index futures trading, no transfer of ownership is involved. Even a giant customer cannot stop others from buying or selling contracts because no one can make himself the sole supplier or sole purchaser.

As regards manipulation, it is theoretically possible and yet practically very difficult. This is because unlike the stock market, the index futures market is trading the index futures which is related to the whole market and not just individual shares. To manipulate the price of futures, the intended manipulator can either try to affect the index (through activities in the stock market) or try to affect the price of the futures contract (through activities in the futures market).

If one wants to affect the index movement, one has to mobilize a lot of capital, trade many kinds of stocks, and complete all transactions in a fast manner. There are altogether 33 constituent stocks which compose the Hang Seng Index. If one has to influence

the spot Index, he has to influence 33 different stocks. The turnover of these constituent stocks in the market is very large and active. One simply cannot possibly acquire over 30% of all the constituent stocks in the market.

Alternatively, it is not so difficult to mark up or down the spot index several points by buying or selling large amounts of less active stocks which have very low turnover but carry heavy weights in Hang Seng Index. Yet this kind of stock may be very difficult to buy or sell later. Manipulators may have to think it over. Either way, the possibility of success is very low and the capital required is huge.

If one wants to affect the price of the futures contract, it will be very difficult and will only have a short-term influence. This is because though probably less capital is needed (futures trade on margin), there are still uncontrollable factors like other investors' behavior, time, execution, etc. For example, if the differential between the Index futures and the spot index is too large, small investors may be doubtful of the market behaviour and will not hold open positions. They will prefer to wait and see what happens. The result may not be as expected by the manipulators.

Moreover, the settlement price of index futures is

the last trading day's average of the Hang Seng Index. It is much more difficult for someone to make high or make low the average price than to affect the closing price only. Also, as the market grows more mature and active, turnover volume becomes larger and larger, the capital involved in a manipulation will become greater and greater.

According to some professionals in the industry, when the Index Futures market was still in the early stage (within first several months after foundation), some manipulators did succeed in pushing up or pulling down 10 points or so in the market so as to make profits. But at the present stage, buying or selling 100 contracts at one time may not affect the price very much. Because there are always people waiting to buy or sell at the other side. Manipulating 10 points may, during active market hours, require selling or buying several hundreds of contracts at one time. The capital involved is very large and whether it succeeds or not will still depend on the market situation.

As a whole, it can be concluded as the market becomes more and more mature, the possibility of market manipulation becomes smaller and smaller.

CHAPTER IX

EVALUATION OF THE HONG KONG MARKET

Past Performance

The Hang Seng Index Futures trading in Hong Kong has operated for nearly one year since its establishment on May 6, 1986. Overall speaking, the market is very successful.

This can be seen from the increase in transaction volume, the increase in demand for Exchange Membership, and the confidence of the Exchange in introducing other financial futures.

Increase in Transaction

The trading becomes more and more active and the amount of total investment increases sharply during the past 10 months. It can be seen from the track records that the total turnover per month increases steadily. The average daily turnover has grown from 1,635 lots in May, 1986 to 14,554 lots in March, 1987. Considering March, 1987 alone, the market value of the futures

transacted amounted to HK$39.5 billion, 66% more than that of the stock market (HK$23.7 billion).[9] Also, within this period, the daily turnover has reached a peak record of over 30,000 lots.

Increase in Demand for Membership

Because of the fact that more and more brokerage houses are interested in trading index futures, the market price of membership, which is transferable, has increased sharply. It has jumped from HK$300,000 to nearly HK$1,000,000 recently. In other words, many institutions consider futures a profitable business. This is a reasonable expectation judging from statistics. At present, there are less than 100 members in the Exchange. During the period May 86 - March 87, the total commission out of futures transaction amounted to HK$0.237 billion. Even if an average is taken, each member can get a commission of HK$2.37 million.[10] After deducting the operating cost, the profit is still highly attractive, especially for the large successful ones. Together with the fact that that HKFE has stopped issuing new licenses/membership aiming to protect the original members, the price of membership is expected to remain high in the near future.

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[9] Hong Kong Economic Journal. April 18 1987.

[10] Ibid.

Recent Development of the Market

A most recent development is that the amount of margin has increased from the original HK$10,000 per contract to HK$12,000 per contract in January, 1987. Players have to deposit more in order to participate in the trading. Yet, as observable from statistics, there is no sign of cooling down of the market. The trend is extremely favourable.

With all the above phenomenon, it can be seen that futures trading in Hong Kong is no longer a quiet circle. The market grows at a satisfactory pace and a bright future is foreseen.

Future Prospects

The Hang Seng Index Futures market has been established for nearly a year. As seen from its past performance, this kind of financial instrument is welcomed by the investors. The daily turnover has increased from several thousands lots to over 30 thousands lots. The growth rate is rather high. As seen from the statistics, for the first few months, most of the contracts traded are spot month contracts (see Appendix). Such a trend suggeststhat few people are making use of the market for hedging and spread trading. In other words, speculation dominated the market. For the recent months, however, it can be seen

that more contracts of distant months are traded. This implies that besides speculation, more and more arbitrage activities and hedging activities are also taking place in the market.

The stock index futures market in Hong Kong will remain to be the largest market outside the U.S. if it can maintain the present performance. At the moment, the Hong Kong Futures Exchange is planning to launch another financial futures instrument: the Hong Kong Dollar Deposit Interest Rate Futures, in the second half of 1987. The first kind of contract to be issued will most likely be the 90 days Interest Rate Futures contract. With the introduction of this new financial futures contract to the market, the trading activities of financial futures in Hong Kong will move a big step foreward. Hence, in the foreseeable future, some people suspect that what may affect the perspective of the Hong Kong stock index futures market will mainly be the external competition from Singapore and Japan and the internal competition from such new financial futures market in Hong Kong.

Competitions

1. Singapore market and the Japan market

Singapore established a market trading stock index futures contract in September, 1986, four months later than the establishment of the Hang Seng Index Futures

in Hong Kong. The kind of instrument it trades is the Nikkei Index Futures which is based on the fluctuation of Nikkei Index - a stock market index of Tokyo.

From past few months observation, it seems that the Singapore market is not a major threat to Hong Kong. It is because few local investors here show much interest in the Japanese stocks. They are not familiar with the stock market in Japan either. Since they have no Japanese stocks in hand and they are not familiar with the Nikkei Index, Hong Kong investors are not likely to invest in the Singapore Nikkei Index Futures market. There is simply no need for hedging and not enough background understanding for speculating. They prefer to play in the more familiar playground, the Hong Kong market, which they already have a lot of experience and can have more direct access of information.

In addition, the Singapore government only encourages large investors to participate in that market. Over 70% of the investment come from the large institutions. There are too few speculators participating to make the market active. The turnover is small and the liquidity is low when compared with the Hong Kong market. With such a small base, foreign investors are reluctant to join the game. In fact, judging from the trade volume (which amounts to only about several hundred contracts per day), the Singapore

index futures market still has a long way to go.

Besides Singapore, another potential competitor is Japan. In Japan, a new stock index futures market will soon open in Osaka. It trades on an index futures based on a Japanese stock market index. As Japan has the largest stock market in the Asian Pacific Region, the establishment of such an index futures market will provide investors new opportunities to arbitrage and hedge as well as speculate. Hence, it may attract foreign investments to participate in the new market. If this is the case, it may affect the Hong Kong market's trading volume. Yet, the degree of influence is still not known. One thing for sure, however, is that investors' objectives are different in different markets. Since the Japan market and the Hong Kong market trade on different instruments, they serve different functions for investors. There is not likely to be direct competition between the two. Moreover, the Japanese government is still cautious in opening its financial markets to foreign investors. Many foreign financial institutions are still unable to get a seat in the Tokyo stock market. In the near future at least, no serious threat to Hong Kong will be expected.

2. The Hong Kong Dollar Deposit Interest Rate Futures

With the coming introduction of the interest rate futures, someone may ask whether competition will exist

between the two instruments in future. The answer is simply not likely. It is because the two markets are basically different. Interest rate and stock index have no direct relationship with each other. The investors playing in the HSI Futures market may not have any interest in playing in the interest rate futures market.

While the hedgers of an interest rate futures market are usually traders and financial institutions, the hedgers of stock index futures market are usually stock holders. As for speculators, those who pay close attention to fluctuations in the stock market may not be that familiar with interest rate fluctuations. In fact, it can be foreseen that the interest rate futures market may not be very active in the near future because the spot interest rate recently is quite stable due to the present political situation and fiscal policies in Hong Kong. Since the expected fluctuation is small, fewer small investors will be attracted. There will be few individual speculators to make the market liquid.

Determinants of a Successful Market

A market provides the facilities to aid the efficient transactions among buyers and sellers. Besides proper management and clear and sound regulations, a good market should possess several

characteristics.[11] These include:

- timely and accurate information;
- liquidity;
- low transaction cost;
- rapid adjustment of prices to new information.

The financial futures market in Hong Kong has been opened for only a year. The above four criteria can be used to evaluate its potential for further success in the future.

Timely and Accurate Information

The information needed most are those about the prices and volumes of past transactions and the current market demand and supply. As suggested earlier, the Exchange has been publishing periodic reports on market statistics for its members. Common investors can also learn about the closing price and transaction volume from many local newspapers. Since an open outcry system is now being used in the market, information about current price and demand is reasonably fast to be obtained, though occasionally human errors cannot be avoided.

Liquidity

Regarding liquidity, the Hong Kong market can

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[11] Investment. pp. 72-74.

still be further improved. While most professionals claim that it is reasonably easy for one to buy or sell contracts quickly in the market, especially when the stock market is also bullish, a large volume of transactions may however still affect the price. This means price continuity cannot always be maintained.

Low Transaction Cost

The cost of transaction is mainly commission charges. Compared with other financial markets, the futures market does not have particularly high transaction costs.

Rapid Price Adjustment

This is still subject to test. While the volatile prices of futures suggest that the prices are rather sensitive, this does not imply the prices have reflected all available information.

CHAPTER X

CONCLUSIONS

The stock index futures market in Hong Kong has been operating for almost one year. Judging from the increase in trade volume, the past ten months is a period of great success. However, during the same period, some minor operational problems have risen and certain local characteristic developmental features have also been observed.

First, from the interviews and records of trade statistics, it can be concluded that speculation dominated the market for the first few months. The then low trade volume of the distant month contracts suggests that few participants made use of the market for hedging or spread trading. However, the recent increase in demand for distant month contracts indicates that more investors have begun to understand the potential multiple functions of such a market. Hedging, spreading, arbitrage, speculation, program trading, etc. are all going on in the market. This is a sign of better maturity.

Second, during the early stage, there were some complaints against probable misconduct and malpractices of some brokers. The major causes of such problems may include the lack of appropriate regulations, the lack of professional ethics for some brokers, and the lack of understanding about making appropriate orders among some clients. While the Exchange has introduced tighter regulatory and monitoring measures with regards to these problems, it is suggested here that greater emphasis should be placed on professionalization of the whole industry. Currently, some new account executives and brokers in the industry have received very little training before they start their jobs. Their qualifications also vary greatly. In some cases, it is very difficult to judge whether a fault is due to intentional misconduct or due to the broker's lack of professional knowledge. It is believed that more professionalization such as setting up qualifying requirements for brokers is crucial to the future success of the market.

Third, like in many other new markets, some people suspect that it is possible to manipulate the futures market in Hong Kong. After an analysis of this problem, it can be concluded that during the early stage when the market was still thin and trading was not very active, it may be theoretically possible to affect the price movement for a very short span of

time. Yet, as trading becomes more active, it is now very difficult to do so in reality. To someone who intends to manipulate, the transaction cost involved will be very great and the effect will be difficult to estimate. In other words, the possibility of successful manipulation in the stock index futures market in Hong Kong is very low.

Fourth, with regards to maturity, the stock index futures market in Hong Kong is still not very mature. The great volatility of the price of index futures suggests the still low price continuity and insufficient liquidity of the Hong Kong market. The violent fluctuation of the price of the distant month contracts in comparison with the spot index also suggests that at present, futures still cannot be used as an efficient aid for predicting the future movement of the spot index.

Finally, with regards to the possibility of competition, it has been suggested that at least in the near future, no significant impact on the Hong Kong market will be expected from Japan and Singapore. This is because the futures market in Singapore and the coming one in Japan are having the Japanese stock index as the underlying instrument. The participants of their markets and that of the local market are very likely to be different groups of people. Moreover, even for those international investors who participate

in all three, the three markets can serve different functions for them.

A number of fundamental factors contribute to the preliminary success of the stock index futures market in Hong Kong. These include the well-developed infrastructure such as an efficient communication network, the absence of foreign exchange control, the previous existence of hundreds of local and foreign financial institutions, the high education standards of the local staff in the industry, and the borrowing of experiences from financial futures market in New York, Chicago, and London, etc. Together with factors like the persistence of a bull market trend in the local stock market for the past year, low interest rates, and familiarity with Hang Seng Index, many private and institutional investors have been attracted to the market. The prospect of the market is basically very bright.

Summarizing, the main recommendations to be made to the stock index futures market in Hong Kong include the introduction of contracts for more distant months (eg. 6-month contracts), the issuance of more memberships under the present strong demand, the laying of greater emphasis on professionalization, and more international promotion and coordination activities. It is believed that these recommendations will contribute to the future success of the Hong Kong

market.

Appendix I

The Constituent Stocks of Hang Seng Index

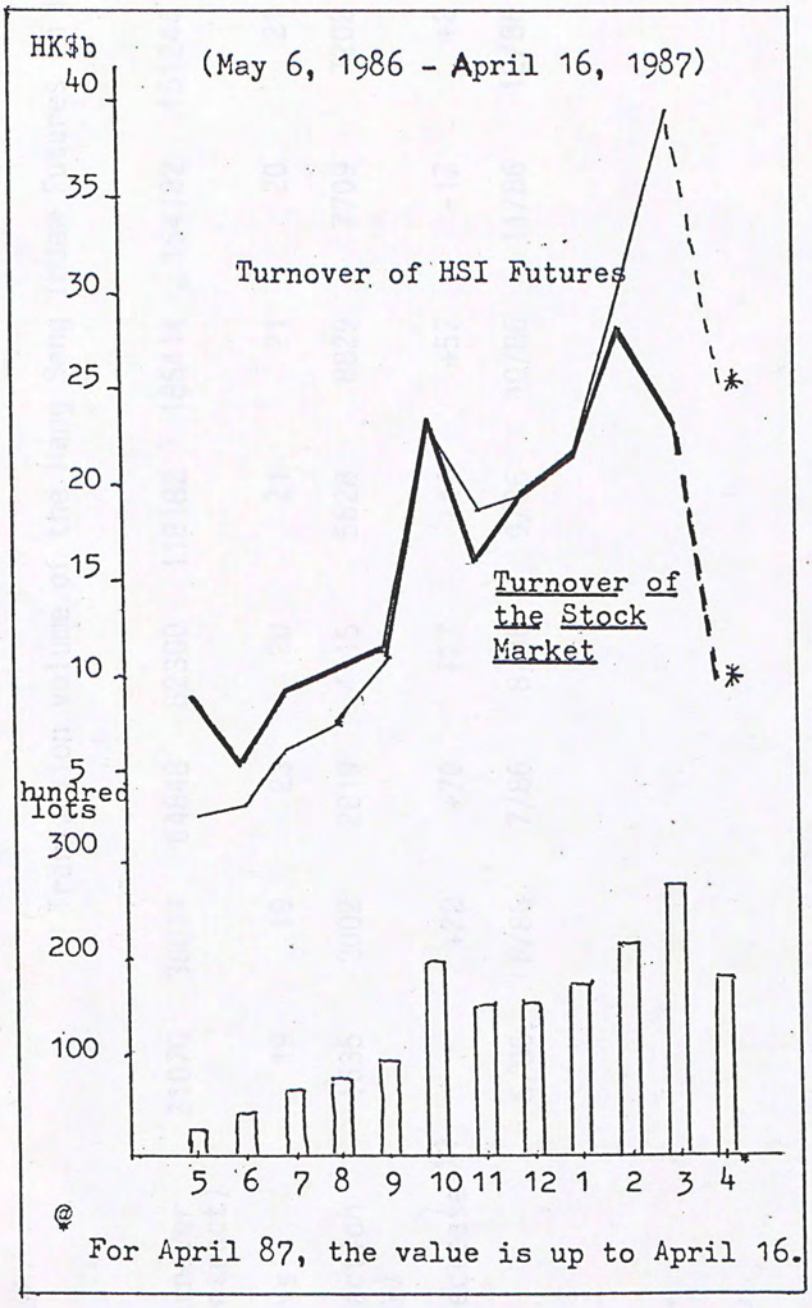
Stock/ Index	Sensitivity Factor#	Current Weight
Bank East Asia	0.94	1.01
Hang Seng Bank	3.04	6.08
Hongkong Bank	31.25	12.07
Jardine Sec	0.77	0.53
Finance Sub-index	--	19.70
China Light	7.95	7.19
HK China Gas	2.68	2.31
HK Electric	11.38	5.76
HK Telephone	13.23	9.01
HK Yaumati	1.38	0.24
K M Bus	2.14	1.05
Utilities Sub-index	--	25.56
Cheung Kong	3.26	3.74
Hang Lung	4.74	1.72
Henderson	10.92	1.31
HK Land	18.09	6.11
HK Realty (A)	1.22	0.71
Hysan	32.59	1.23
New World	8.94	2.99
SHK Prop.	4.06	2.81
Tai Cheung	3.20	0.35
Properties Sub-Index	--	20.98
Cathay Pacific	21.96	6.91
G I Cement	0.57	0.27
HAECO	0.51	0.91
HK & Kln Wharf	12.89	5.02
HK Hotels	0.82	1.69
HK-TVB	3.48	1.35
Hut Whampoa	4.39	7.06
Jardine Hldg	3.42	2.40
Miramar	3.83	0.79
Stelux	1.14	0.11
Swire Pac (A)	6.55	4.46
Dairy Farm	2.45	0.20
Winsor	1.57	0.76
World Int'l	13.80	1.84
Com & Ind Sub-Index	--	33.76
Hang Seng Index	--	100.00

Note : (1) Historical figures are used in computing yield and P/E ratio.

(2) #Change in HSI (points) per dollar change in stock price.

Appendix II

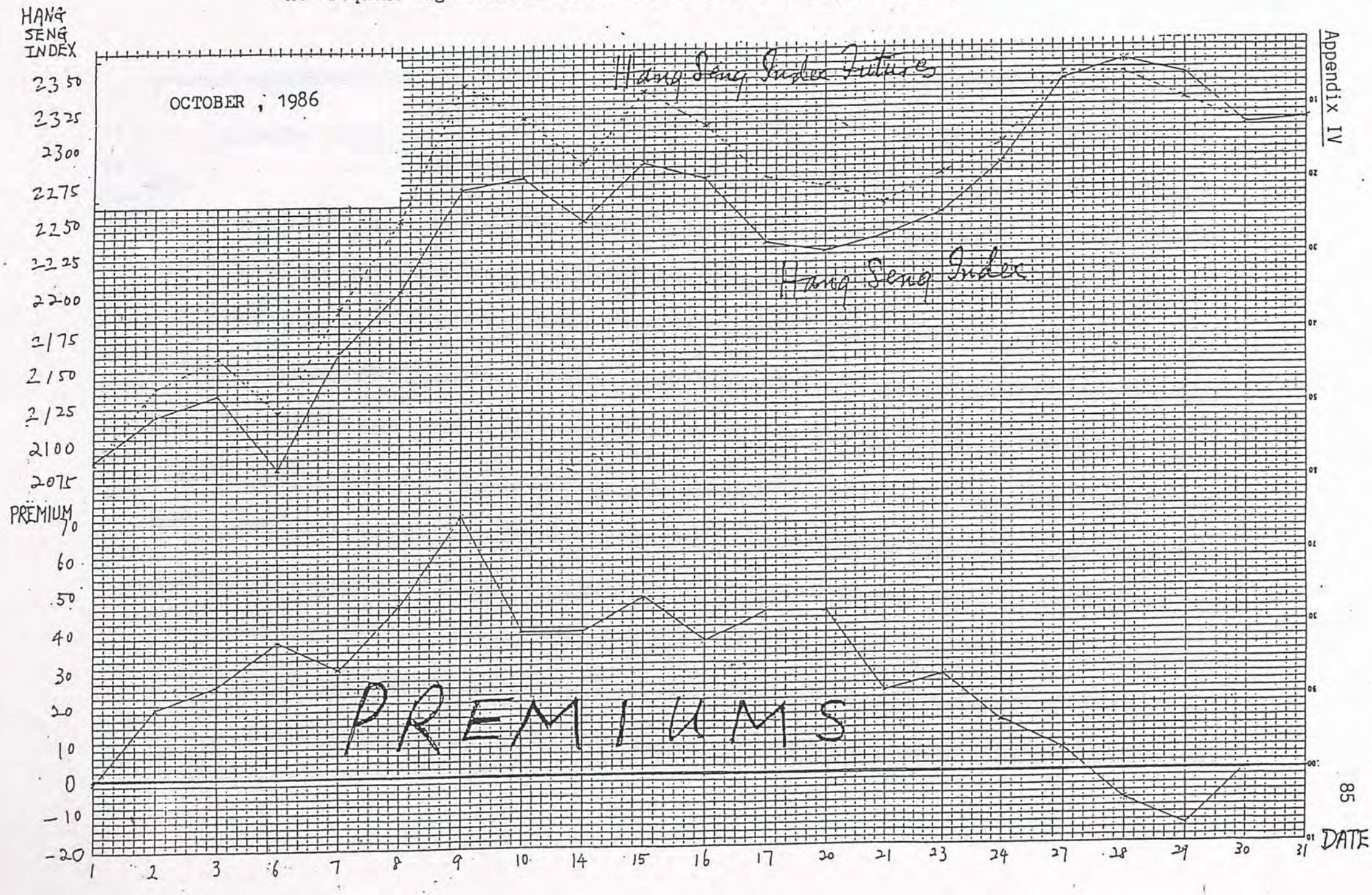
A Comparison of the Monthly Turnover of the Stock Market and Futures Market

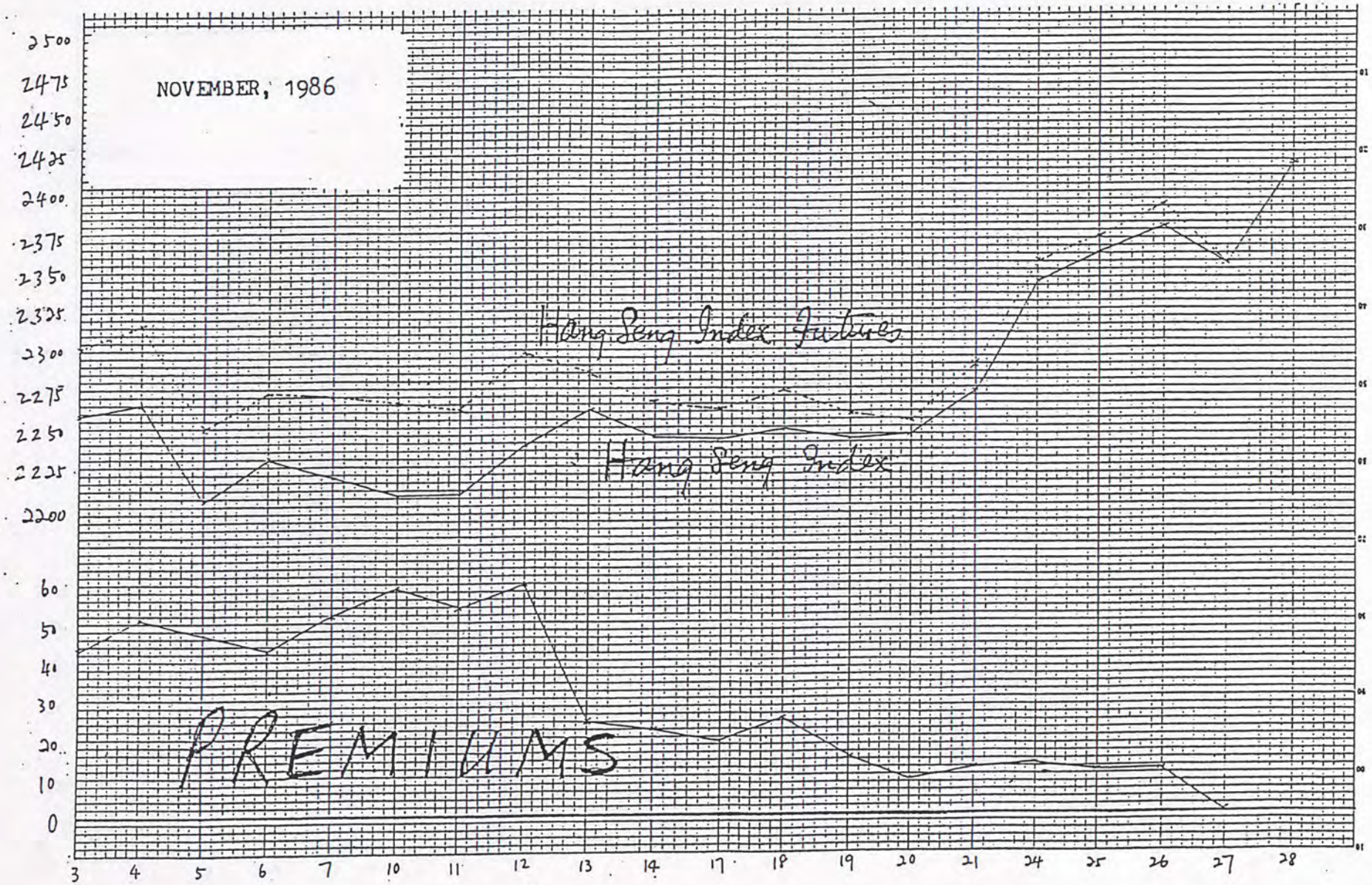


Transaction volume of the Hang Seng Index Futures in Hong Kong

Monthly Turnover (no. of contract)	31070	38039	64848	82300	118182	185414	154182	151244	185380	222859	323381
Trading Days	19	19	23	20	21	21	20	21	19	20	22
Avg. Transaction (per day)	1635	2002	2819	4115	5628	8829	7709	7202	9757	11143	14699
Increase/Decrease(%)		+22	+70	+27	+44	+57	-17	+2	+23	+20	+45
Month	5/86	6/86	7/86	8/86	9/86	10/86	11/86	12/86	1/87	2/87	3/87

The Frequent High Premium between HSI Futures and Hang Seng Index




NOVEMBER, 1986
Hang Seng Index Futures
Hang Seng Index
PREMIUMS
2500
2475
2450
2425
2400
2375
2350
2325
2300
2275
2250
2225
2200
60
50
40
30
20
10
0
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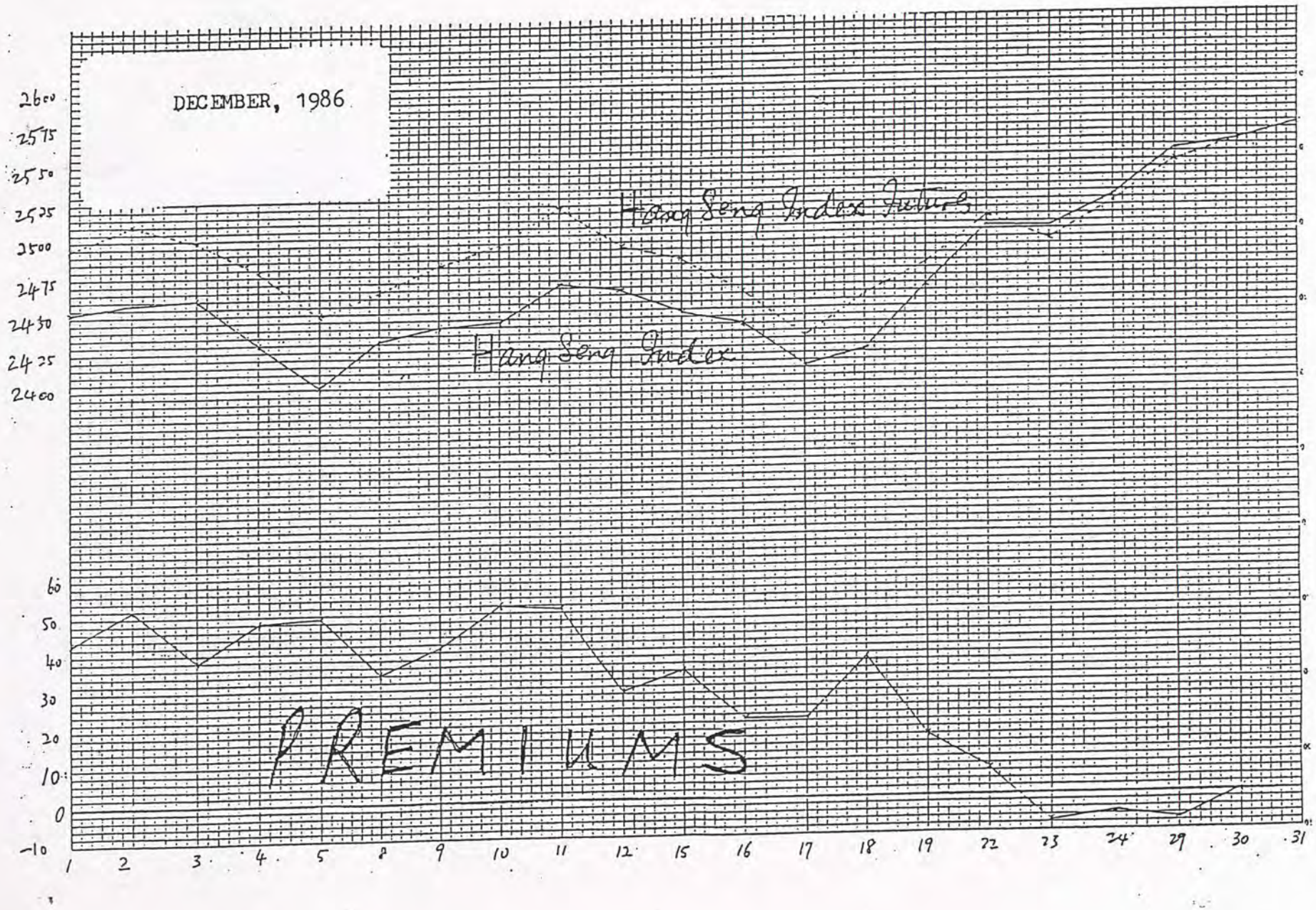
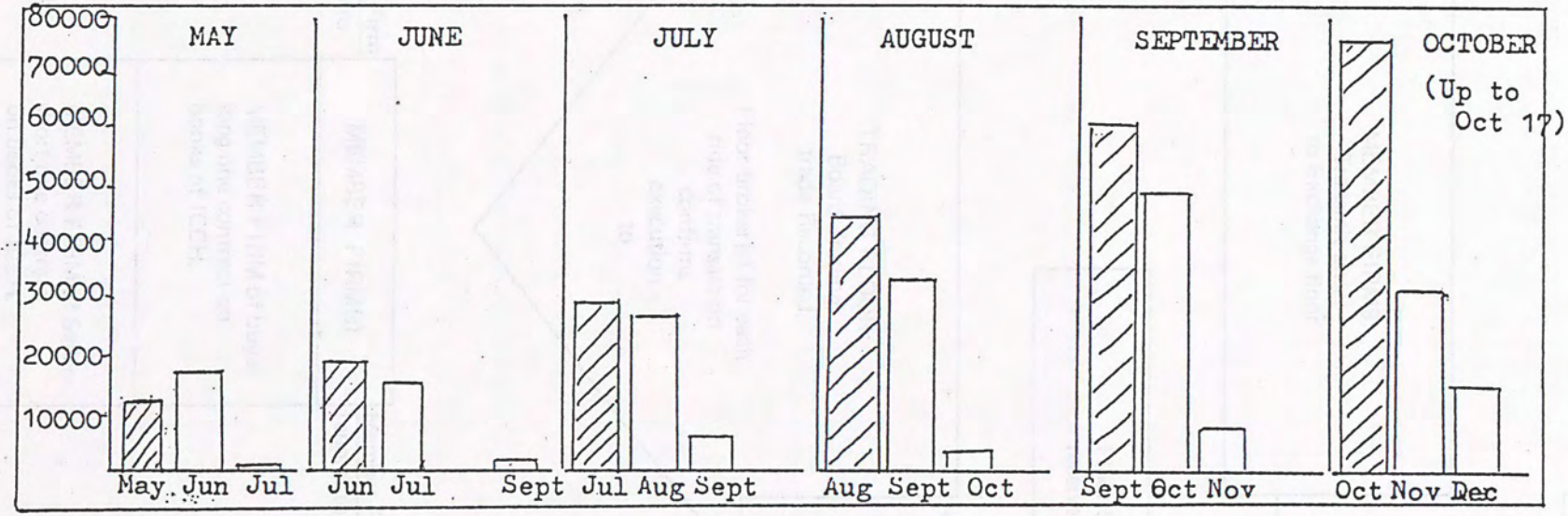
24
25
26
27
28

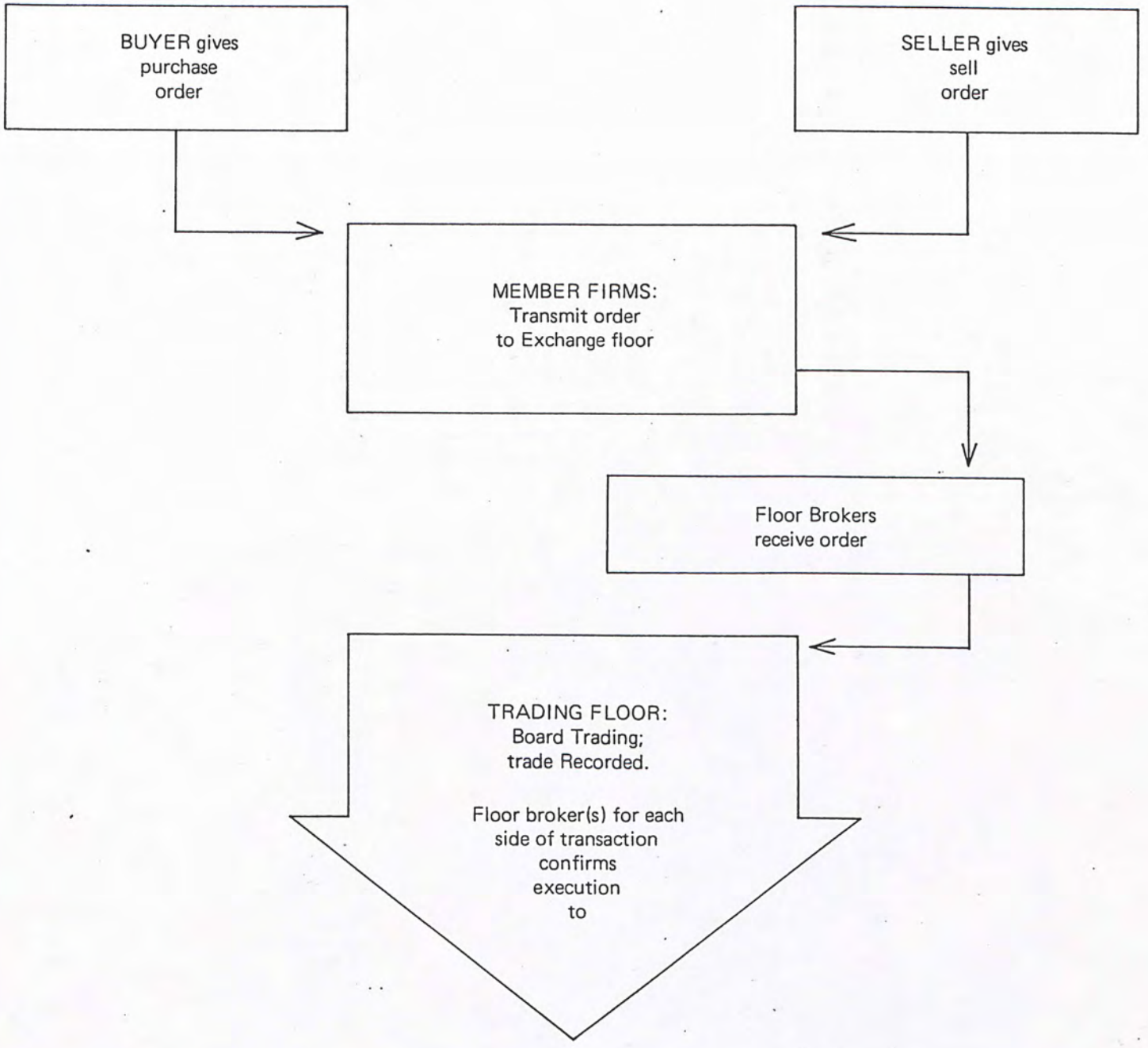

DECEMBER, 1986
Hang Seng Index Future
Hang Seng Index
PREMIUMS
2600
2575
2550
2525
2500
2475
2450
2425
2400
60
50
40
30
20
10
0
-10
1
2
3
4
5
8
9
10
11
12
15
16
17
18
19
22
23
24
29
30
31

The Relative Transaction Volumes among Contracts of different Maturity Months

(May 1986 - October 1986)

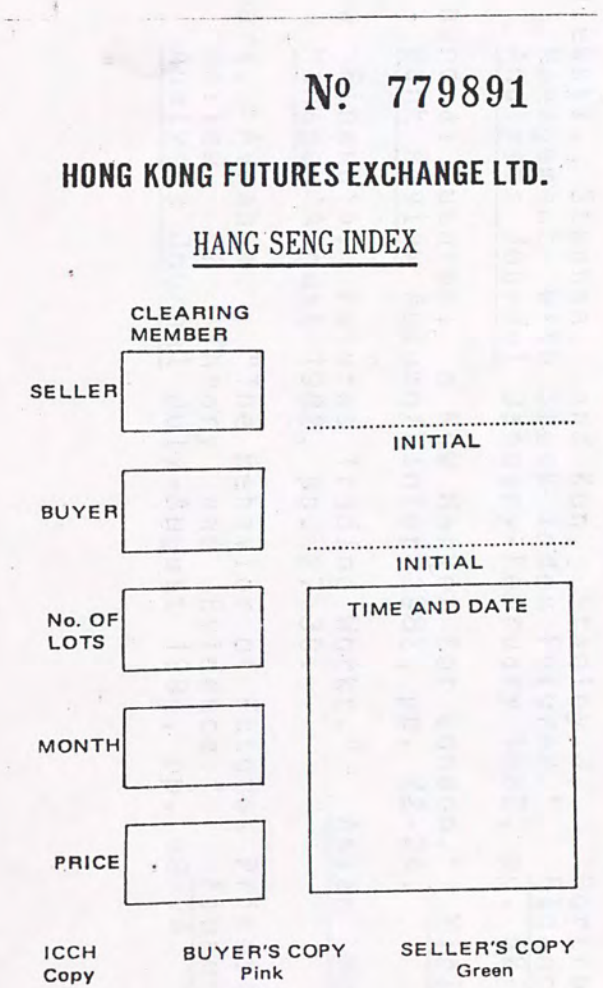


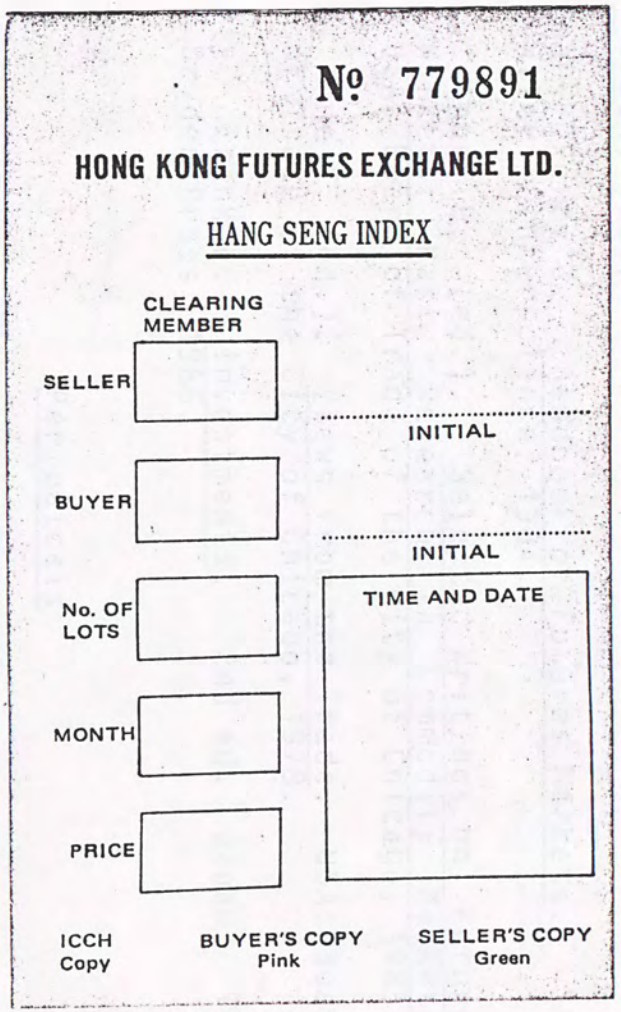
ORDER FLOW AND EXECUTION PROCESS

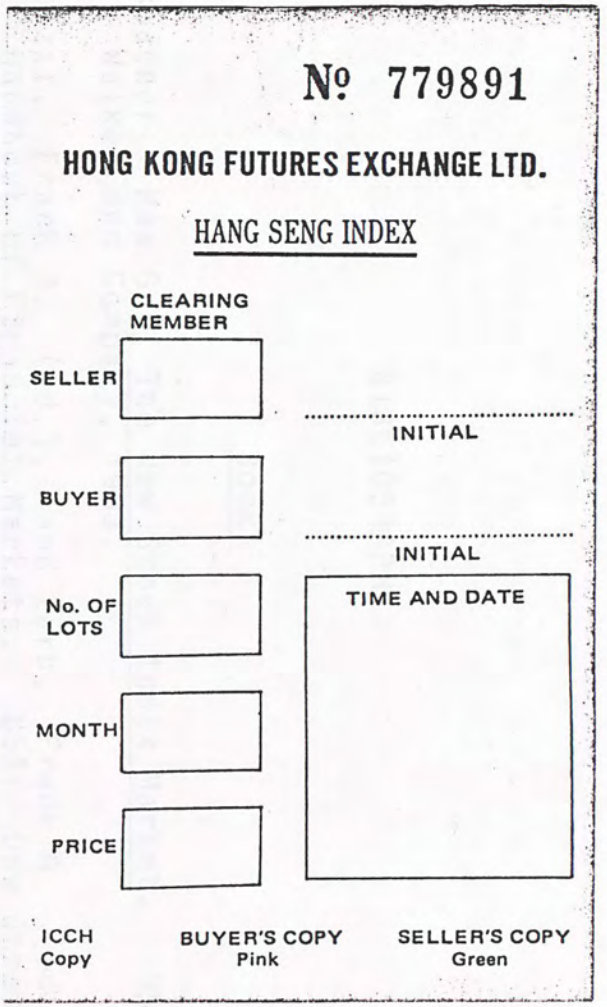


BUYER and SELLER	Member Firm confirms to	MEMBER FIRM(s)	Member Firm reports to	ICCH Clearing House
BUYER now long one contract on books of Member Firm through which they trade.		MEMBER FIRM of buyer long one contract on books of ICCH.		Reconciles trades; assumes opposite side of trade for buyer and seller.
SELLER now short one contract on books of Member Firm through which they trade.		MEMBER FIRM of Seller short one contract on books of ICCH.		ICCH now long one obligation and short one obligation. Total open interest: one contract.

Sample Clearing Slips







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